EXHIBIT 7 (Continued)

COMPARISON OF STATE REIMBURSEMENT METHODOLOGIES FOR INPATIENT HOSPITAL SERVICES

	North Carolina	Alabama	Florida	Georgia	Kentucky
Medicaid Cost Coverage, 1989	78%	84%	82%	72%	85%
Expenditures per Patient Day, 1990	HCFA: $628 DMA: $419	$632	$656	N/A	N/A
Expenditures per Discharge, 1990	HCFA: $3,580 DMA: $2,346	$2,626	$3,926	N/A	N/A
Expenditures per recipient, 1990	$2,754	$2,297	$3,857	$4,708	$2,696
Average Length of Stay, 1990	5.70	4.16	5.98	N/A	N/A

EXHIBIT 7 (Continued)

COMPARISON OF STATE REIMBURSEMENT METHODOLOGIES FOR INPATIENT HOSPITAL SERVICES

	North Carolina	Mississippi	South Carolina	Tennessee	Virginia
Payment Methodology	Prospective; state-operated: cost	Prospective	Prospective	Prospective	Prospective
Payment Unit	Per diem	Per diem	Per discharge and per case	Per diem	Per diem
Standard for Rate Determination	Hospital-specific with cost ceilings at eightieth percentile of all facilities' arrayed costs; psychiatric reimbursed statewide median cost	Hospital-specific; ceilings set at eightieth percentile of each peer group's arrayed costs	Hospital per discharge rates for most frequently occurring DRGs; hospital-specific per diem rates for less common procedures	Hospital-specific	Hospital-specific; ceiling are calculated at peer grouped 1982 median costs
Classification and Relative Weights	N/A	N/A	Medicare grouper and South Carolina relative weights	N/A	N/A

EXHIBIT 7 (Continued)

COMPARISON OF STATE REIMBURSEMENT METHODOLOGIES FOR INPATIENT HOSPITAL SERVICES

	North Carolina	Mississippi	South Carolina	Tennessee	Virginia
Base Year	1981, unless rebased through appeals process	Most recent cost report	1987	1988	Previous year
Update/ Inflation Factor	Inflation and HCFA update	DRI Regional Marketbasket	HCFA update for non-PPS hospitals	ProPAC Update	Virginia-specific DRI
Capital Cost Reimbursement	Prospective	Capital costs paid as part of all-inclusive rate; payments subject to occupancy adjustments	Eighty-five percent of allowable costs	Cost	Cost
Medical Education Cost Reimbursement		Education costs paid as part of all-inclusive rate	Eighty-five percent of allowable costs	Cost	Cost
Service Limits	None	Thirty days/year	None	Reimbursement for operating costs limited to sixty percent of rate after twenty days	Twenty-one per admission

EXHIBIT 7 (Continued)

COMPARISON OF STATE REIMBURSEMENT METHODOLOGIES FOR INPATIENT HOSPITAL SERVICES

	North Carolina	Mississippi	South Carolina	Tennessee	Virginia
Medicaid Cost Coverage, 1989	78%	93%	69%	93%	77%
Expenditures per Patient Day, 1990	HCFA: $628 DMA: $419	$551	$592	$421	$565
Expenditures per Discharge, 1990	HCFA: $3,580 DMA: $2,346	$1,396	$3,493	$1,319	$2,953
Expenditures per recipient, 1990	$2,754	$2,008	$2,070	$2,318	$2,975
Average Length of Stay, 1990	5.70	2.53	5.9	3.13	5.23

Sources:
- Commerce Clearing House
- Medicare/Medicaid Guide
- Prospective Payment Assessment Commission 1989
- Health Care Financing Administration

expensive community hospitals. Adopting this approach is therefore recommended only in areas in which excess utilization occurs or high intensity settings exist. This approach offers the advantages of being more politically acceptable to hospitals and less disruptive of established patterns of care. However, the approach is more complex to implement and administer, and requires extensive utilization monitoring by both hospitals and the State.

Finding 5: Overall costs per inpatient stay in North Carolina hospitals are high in comparison to other southeastern states.

Although the Medicaid program reimburses hospitals based on a prospective rate, and has achieved some degree of control over payments, it is important to examine inpatient hospital costs in the State because all other payors are affected by increasing costs. In addition, to the extent that Medicaid payments remain relatively fixed, but costs continue to increase, the costs not reimbursed by Medicaid are shifted to other payors. Finally, hospitals (and the courts) evaluate the equity of a state's reimbursement policies based on the percentage of costs covered. As the percentage of cost coverage declines, the inadequacy of Medicaid payment is blamed; however, the increase in costs must be considered in the equation.

Between 1985 and 1991, North Carolina's hospital cost per day has increased the greatest of all states in the Southeastern Atlantic states (with the exception of Delaware, which is classified in this region by the American Hospital Association). In 1985, North Carolina's average cost per day was $330.00. In 1991, the average cost per day had increased by 66.5 percent, or $219 a day to $549. Although the 1991 cost per day is less than six other states in the region, the increase costs have out-paced all states in the region and the average per day inpatient hospital cost for the United States. Exhibit 8 provides further information on cost per day.

The average cost per stay in North Carolina has increased at a greater rate than all Southeastern Atlantic states over the last six years. The average cost per hospital stay in North Carolina jumped from $2,294 in 1985 to $4,032 in 1991, a 75.8 percent increase. For all states in the region, the average increase was 59.7 percent, and was 53.1 percent for all hospitals in the United States. Exhibit 9 provides more information regarding cost per stay.

The highest increase in cost per day and cost per stay in North Carolina occur in the larger metropolitan areas, specifically:

- Charlotte-Gastonia-Rock Hill
- Greensboro-Winston
- Raleigh-Durham

EXHIBIT 8

COMPARISON OF HOSPITAL INPATIENT COSTS PER DAY IN SOUTHEAST REGION AND UNITED STATES (1985-1991)

	1985	1991	Percent Change
Delaware	388.68	712.81	83.4
D.C.	581.00	844.49	45.3
Florida	440.36	717.60	62.9
Georgia	349.27	577.08	65.2
Maryland	395.33	623.75	57.8
North Carolina	330.00	549.44	66.5
South Carolina	327.77	533.60	62.8
Virginia	357.55	588.74	64.7
West Virginia	343.82	533.83	55.3
Region	384.88	624.73	62.3
U.S.	411.00	636.93	54.9

Source: American Hospital Association, 1985, 1991

EXHIBIT 9

COMPARISON OF HOSPITAL INPATIENT COSTS PER STAY IN SOUTHEAST REGION AND UNITED STATES (1985-1991)

	1985	1991	Percent Change
Delaware	3,034.75	4,852.83	59.9
D.C.	4,674.81	6,600.12	41.2
Florida	3,095.74	4,968.11	60.5
Georgia	2,280.00	3,719.97	71.9
Maryland	3,052.13	4,279.88	40.2
North Carolina	2,294.30	4,032.32	75.8
South Carolina	2,340.41	3,732.49	56.1
Virginia	2,640.44	4,054.11	53.5
West Virginia	2,299.94	3,612.16	57.3
Region	2,727.40	4,355.84	59.7
U.S.	2,995.38	4,587.87	53.1

Source: American Hospital Association, 1985, 1991

For example, the average cost per stay in the Raleigh-Durham area increased over 209 percent from 1985 to 1991, as compared with the average cost per stay nationwide, increased by 53 percent. Hospital costs in the Charlotte-Gastonia-Rock Hill area increased by 90 percent from 1985 to 1991.

The decrease in the number of hospital beds in North Carolina's metropolitan areas have been less than the national average; in the Raleigh-Durham area, there was no significant decrease in hospital beds, even though their occupancy rate dropped 2.5 percent between 1985 and 1991. Exhibit 10 provides further information on costs and length of stays in these geographic areas.

Recommendations

Recommendation 1: Implement a DRG-based reimbursement system which uses peer groups to establish base payment amounts.

A DRG-based system distributes payments according to the resources necessary to provide care to Medicaid patients. Hospitals are given incentives to control expenditures by ensuring appropriate utilization of hospital services. Reimbursement on the basis of discharges controls average length of stay. The State may also choose to implement per diem payments for certain cases if there is insufficient volume to create stable DRG weights.

Implementation of the DRG system would occur with selection of a new base year. Peer-grouped based DRG rates will redistribute payments to providers. Capital payment could be based on Medicare's prospective rates.

Implications:

- Appropriate utilization of hospital services is encouraged.
- Facilities are provided incentives to operate efficiently.
- Facilities are reimbursed based on the relative resources necessary to provide particular types of care.
- Average length of stay will be reduced. Upon subsequent rebasing, the State can achieve savings through this reduction.

EXHIBIT 10

SELECTED INFORMATION ON NORTH CAROLINA'S METROPOLITAN AREAS

	Average Cost Per Stay		
	1985	1991	Percent Change
Metropolitan Area	2,591.14	4,685	80.1
Charlotte	2,228.04	4,347	95.1
Greensboro	2,350.47	4,340	84.7
Raleigh-Durham	1,974.87	6,116	209.7

	Occupancy		
	1985	1991	Percent Change
Metropolitan Area	73.9	75.0	1.3
Charlotte	64.2	73.4	14.3
Greensboro	76.1	77.6	2.0
Raleigh-Durham	79.2	77.2	-2.5

	Average Length Of Stay		
	1985	1991	Percent Change
Metropolitan Area	7.2	7.3	1.3
Charlotte	6.8	7.1	4.4
Greensboro	7.3	7.5	2.7
Raleigh-Durham	8.1	7.7	-4.9

	Average Cost Per Day		
	1985	1991	Percent Change
Metropolitan Area	360.20	641.7	78.2
Charlotte	325.16	618.4	90.2
Greensboro	324.34	581.4	79.2
Raleigh-Durham	477.62	805.30	68.6

Source: American Hospital Association, 1985, 1991

Recommendation 2: Implement selective contracting programs in geographically feasible regions of the State.

The State may consider selective contracting programs for areas where competition among hospitals exists. For example, a program may be feasible in Durham, Charlotte and Raleigh.

Where competition among hospitals exists, North Carolina Medicaid should negotiate with facilities in order to obtain better rates. In addition, the Medicaid program should develop mechanisms which encourage physicians to send recipients to these low-cost facilities wherever possible. A selective contracting system would encourage facilities to operate efficiently and reduce Medicaid expenditures for inpatient hospital services.

Implications:

- Utilization of low-cost facilities is encouraged.
- Hospitals are provided incentives to operate efficiently, and to compete on the basis of costs.
- The provision of care is moved to the most cost-effective and efficient hospitals.
- Medicaid expenditures can be reduced.
- Legal challenges to payment rates can be minimized since hospitals negotiate and agree upon payment rates.

Recommendation 3: Implement a global budgeting approach to hospital reimbursement on a pilot basis in one area of the State.

The purpose of global budgeting would be to develop a methodology that allows a budgetary determination to be made for each facility that is related to the function of the facility. The allocation should reasonably contain volume growth, but provide enough resources to allow the facility to meet its service goals and maintain financial stability.

Global budgeting would limit the total level of reimbursement for services to a particular entity. Hospitals, clinics or other institutions would be given an annual operating budget to cover all or a portion of services projected to be purchased by Medicaid within a given time-frame. Annual operating budgets would be based on last year's budget adjusted for current inflationary trends. Each hospital would be responsible for allocating resources so that total expenditures remain within these budget constraints. Under a global budgeting system, the acquisition and reimbursement of equipment and high technology, as well as

capital improvements, would require approval of a consortium comprised of participating hospitals' board of directors.

Global budgeting differs from itemized budgeting as used for Medical inpatient reimbursement. Under Medicare's inpatient prospective payment system, a hospital receives a previously fixed amount for each diagnosis related group (DRG). The hospital still relies on volume to generate income. Dependence on volume production no longer exists under global budgeting because the facility receives a single prospective budget for all its activities. Variables such as demand for health care and case-mix become parameters that are factors into the global budgeting process.

Internationally, several entities employ global budgeting to control the costs of hospital care. The most recent example in the United States is the Rochester Hospital Experimental Program (HEP) in New York.

HEP controlled costs by limiting total hospital revenue increases to the rate of inflation. At the program's initiation, each hospital received a prospectively determined, fixed budget. Overall, HEP was effective in controlling costs and improving the financial performance of hospitals. During its operation, Rochester hospitals experienced cost increases below the average increases for the State of New York and the United States as a whole. In 1979, the year before the program went into effect, the average cost increase for Rochester area hospitals was 8 percent, significantly below the average cost increase for the entire country of 13 percent. In 1980, the first year the program was in effect, Rochester area hospital costs increased 9 percent in comparison to 17 percent for the entire United States. Between 1980 and 1984, Rochester area costs increases were only 65 percent as great as those for the entire country. In 1980, expenditures per capita for RAHC hospitals were approximately 80 percent of other New York State hospitals and decreased to 71 percent by 1986 (Sutor, 1989). In addition to controlling costs, Rochester area hospitals were also able to improve their financial condition, showing a cumulative operating profit of $11.9 million from 1980 through 1984.

Global budgeting can be a powerful tool to control the introduction and diffusion of new technology. Requests and operating budgets for new programs and technologies must be approved or they are not eligible for reimbursement. Centralized planning and the need to gain approval are effective in restricting both the number and the spread of new, high technology programs and procedures.

Recently, Vermont legislature has enacted legislation which requires the newly created Health Care Authority to establish target expenditures for the following year's health care costs (FY94) and to develop a global budgeting strategy for the consecutive year's reimbursement of inpatient and outpatient hospital, nursing home costs and ancillary medical services.

- This approach, although demonstrated to be effective in controlling of costs, is viewed as a radical approach to health care reform.

- A demonstration waiver from HCFA would be required to implement this approach because the system would be on all-payor approach, and both Medicare and Medicaid payments would be affected.

- While Medicaid payment per day would likely increase; total inpatient expenditures, as well as other payor's payments, could decrease, resulting in decreased cost of insurance coverage. This is a positive feature for employees concerned about the cost of health insurance.

- Private insurors, e.g., Blue Cross of North Carolina, would have to agree to participate.

- Occupancy rates would continue to decrease; the viability of hospitals with excess occupancy could be threatened.

- The impact on teaching hospitals must be assessed.

- Significant start-up time is needed.

Cost Savings

Exhibit 11 presents estimates of cost savings associated with implementation of a DRG-based reimbursement system and a selective contracting program. Savings are based on a projected annual growth equal to the average growth in North Carolina expenditures per recipient between FY87 and FY92. Initial years savings for implementing changes in hospital inpatient reimbursement methodology will total $12.6 million. Cumulative savings of $189 million would occur over a ten year period.

The cost reduction implications of global budgeting are significant; however, planning and implementation would require about two years. Savings estimates are dependent upon the areas in which the pilot would be implemented.

Implementation Considerations

Implementation of a reimbursement system based on DRGs will require several administrative changes, including modifications of the following:

- Billing forms
- State regulations
- Provider manuals

- Medicaid State Plan (must be submitted to the Health Care Financing Administration)
- Utilization review activities
- Medicaid Management Information System (MMIS)

Additionally, North Carolina should conduct analyses to evaluate the impact of the new reimbursement methodology on particular types of hospitals, particularly its rural hospitals. The State must also analyze data to ensure its compliance with the Boren amendment, which requires states to provide assurances to HCFA that the reimbursement methodology covers the costs which must be incurred by economic and efficiently operated facilities.

EXHIBIT 11

PROJECTED COST SAVINGS (In Millions)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Expenditures	$126.2	$130.7	$135.3	$140.1	$145.1	$150.2	$155.6	$161.1	$166.8	$172.7
Implement DRG/Peer Group system	$2.5	$6.5	$6.8	$7.0	$7.3	$7.5	$7.8	$8.1	$8.3	$8.6
Implement Selective Contract System	$10.1	$10.5	$10.8	$11.2	$11.6	$12.0	$12.4	$12.9	$13.3	$13.8
Revised Budget	$113.6	$113.7	$117.7	$121.9	$126.2	$130.7	$135.4	$140.2	$145.1	$150.3
Total Savings Per Year	$12.6	$17.0	$17.6	$18.2	$18.9	$19.5	$20.2	$20.9	$21.7	$22.5
Cumulative Savings	$12.6	$29.6	$47.2	$65.4	$84.3	$103.8	$124.0	$144.9	$166.6	$189.1

Assumptions:
- Projected inflation 3.5 percent equal to average increase in payment per recipient between FY87 an FY92
- Savings from implementing DRG/Peer Group system estimated at two percent; assumes budget-neutral rebasing, use of peer groups and some statewide rates; prospective capital reimbursement (based on savings experienced in other states)
- Savings from selective contracting estimated at eight percent (based on research and evaluation of selective contracting in other states)

2.27